

with respect to the optical signal with wavelength λ_i and the attenuation $A_j(\lambda_i)$ is produced by the dopant j of one unit.

25. (New) The optical fiber for attenuating optical signal according to claim 1, wherein said dopants comprise at least two kinds of transitional metals selected from the group consisting of Co, Ni, Cr, V, Fe, Mn, Tb and Tm.

26. (New) An optical fiber for attenuating an optical signal comprising a core and a cladding, wherein n ($n \geq 2$) kinds of dopants are included in the optical fiber for attenuating the optical signal,

wherein the concentration W_j ($j=1, 2, 3, \dots, n$) in weight % is adjusted, with respect to a wavelength λ_i ($i=1, 2, \dots, m; m \geq 2$), to satisfy the following expressions 1 and 2;

Expression 1

$$0.9 < \frac{\alpha(\lambda_i)}{\alpha(\lambda_k)} < 1.1$$

Expression 2

$$\alpha(\lambda_i) = \sum_{j=1}^n w_j A_j(\lambda_i)$$

wherein λ_i is a wavelength of the optical signal,

$\alpha(\lambda_i)$ is an attenuation amount of the optical fiber for attenuating the optical signal with respect to the optical signal having the wavelength λ_i ,

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24